

Apparatus and Method for Casting a Prosthetic Socket Under Vacuum

Abstract of Disclosure

A prosthetic socket is made by wrapping water-soaked plaster bandages around a residual limb or around a prosthetic liner within which is disposed a residual limb, and positioning a vacuum wick in overlying relation to the plaster bandages. The residual limb, prosthetic liner, plaster bandages, and vacuum wick means are then inserted into a vacuum bladder. The vacuum bladder is sealed and a predetermined vacuum is applied internally to the bladder until the plaster hardens into a negative cast. The residual limb is manipulated through the vacuum bladder to modify the geometry of the plaster before the plaster hardens. The negative cast is removed from the residual limb and a positive cast is produced by pouring plaster into the negative cast. A thermoplastic sheet is thermoformed over the positive cast or a carbon-epoxy matrix is laminated over the positive cast. This eliminates reduction and modification of a hard positive cast.

Figures

Figure 1: A line graph showing the relationship between the number of hours spent studying and the score on a math test. The x-axis represents 'Hours Studied' (0 to 10) and the y-axis represents 'Test Score' (0 to 100). The data points are as follows:

Hours Studied	Test Score
0	55
1	60
2	65
3	70
4	75
5	80
6	85
7	90
8	95
9	100
10	100

The graph shows a positive correlation between study hours and test scores, with the score increasing from 55 at 0 hours to 100 at 10 hours.